



## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2021-0572; Project Identifier MCAI-2021-00391-R; Amendment 39-21778; AD 2021-22-05]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Leonardo S.p.a. Helicopters**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule.

**SUMMARY:** The FAA is adopting a new airworthiness directive (AD) for all Leonardo S.p.a. Model A119 and AW119 MKII helicopters. This AD was prompted by reports of abnormal play on the collective torque tube on two Model AW119 MKII helicopters.

This AD requires repetitive inspections of affected torque tube assemblies for any deficiency and corrective action if necessary; and the replacement of any affected part with a serviceable part, which is terminating action for the repetitive inspections, as specified in a European Union Aviation Safety Agency (EASA) AD, which is incorporated by reference. The FAA is issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** For EASA material incorporated by reference (IBR) in this AD, contact EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; telephone +49 221 8999

000; email [ADs@easa.europa.eu](mailto:ADs@easa.europa.eu); Internet [www.easa.europa.eu](http://www.easa.europa.eu). You may find this IBR material on the EASA website at <https://ad.easa.europa.eu>. You may view this material at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N 321, Fort Worth, TX 76177. For information on the availability of the EASA material at the FAA, call (817) 222-5110. It is also available in the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0572.

### **Examining the AD Docket**

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0572; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the mandatory continuing airworthiness information (MCAI), any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

**FOR FURTHER INFORMATION CONTACT:** Andrea Jimenez, Aerospace Engineer, COS Program Management Section, Operational Safety Branch, Compliance &

Airworthiness Division, FAA, 1600 Stewart Ave., Mail Stop: Room 410, Westbury, NY 11590; telephone (516) 228-7330; email [andrea.jimenez@faa.gov](mailto:andrea.jimenez@faa.gov).

## **SUPPLEMENTARY INFORMATION:**

### **Background**

EASA, which is the Technical Agent for the Member States of the European Union, has issued EASA AD 2021-0096, dated March 31, 2021 (EASA AD 2021-0096), to correct an unsafe condition for Leonardo S.p.A. Helicopters, formerly Finmeccanica S.p.A., AgustaWestland S.p.A., Agusta S.p.A.; and AgustaWestland Philadelphia Corporation, formerly Agusta Aerospace Corporation, Model A119 and AW119MKII helicopters, all serial numbers.

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to all Leonardo S.p.a. Model A119 and AW119 MKII helicopters. The NPRM published in the *Federal Register* on July 20, 2021 (86 FR 38242). The NPRM was prompted by reports of abnormal play on the collective torque tube on two Model AW119 MKII helicopters. Investigations revealed that these events were due to an erroneous manufacturing process, affecting certain collective torque tube assemblies. The affected batch numbers were identified. Leonardo S.p.a. Model A119 helicopters are similar in design and may be subject to the same unsafe condition revealed on the Model AW119 MKII helicopters. The NPRM proposed to require repetitive inspections of affected torque tube assemblies for any deficiency and corrective action if necessary; and the replacement of any affected part with a serviceable part, which is terminating action for the repetitive inspections, as specified in EASA AD 2021-0096.

The FAA is issuing this AD to address abnormal play on the collective torque tube, which could result in reduced control of the helicopter, resulting in a forced landing

and consequent damage to the helicopter and injury to occupants. See EASA AD 2021-0096 for additional background information.

## **Discussion of Final Airworthiness Directive**

### **Comments**

The FAA received one comment from Air Methods Corporation (Air Methods). The following presents the comment received on the NPRM and the FAA's response to that comment.

### **Request to Apply Inspection and Replacement Criteria to Additional Torque Tube Batch Numbers**

Air Methods requested that paragraph (h)(6) in the "Exceptions to EASA AD 2021-0096" paragraph of the proposed AD be revised to allow additional appropriate actions for torque tubes that have batch numbers that are "doubted." The commenter stated that applying the Group 1 inspection and replacement criteria to any torque tube, regardless of batch number, is the most conservative action possible within the scope of the service information referenced in EASA AD 2021-0096.

The FAA does not agree with the commenter's request. The intent of this AD is match the intent of EASA AD 2021-0096, which does not include torque tube batch numbers that are unknown or "in doubt" within the Group 1 helicopters. Also, if a "doubted" torque tube batch number is ultimately determined not to be within the number ranges designated as Group 1 or Group 2 in EASA AD 2021-0096, then it would be unnecessary to subject that torque tube to the inspection and replacement requirements for Group 1 helicopters. In addition, once this AD is published, any person may request an alternative method of compliance (AMOC) by using the procedures specified in paragraph (j) of this AD. The FAA has not changed this AD regarding this issue.

### **Conclusion**

The FAA reviewed the relevant data, considered the comment received, and determined that air safety requires adopting this AD as proposed. Except for minor

editorial changes this AD is adopted as proposed in the NPRM. None of the changes will increase the economic burden on any operator. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products.

#### **Related Service Information Under 1 CFR Part 51**

EASA AD 2021-0096 requires repetitive inspections of the affected torque tube assemblies for any deficiency (i.e., any play) by marking the torque tube assembly and the collar and applying specific loads to determine if there is any play; and replacement of any affected part that has any play with a serviceable part. EASA AD 2021-0096 also requires the eventual replacement of any affected part with a serviceable part, and specifies that replacement of an affected part on a helicopter constitutes terminating action for the repetitive inspections for that helicopter.

This material is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

## Differences Between This AD and the EASA AD

EASA AD 2021-0096 supersedes EASA AD 2019-0057, dated March 20, 2019 (EASA AD 2019-0057). The Group 1 helicopters identified in both EASA AD 2021-0096 and EASA AD 2019-0057 are helicopters with collective stick torque tube assemblies having part number (P/N) 109-0011-03-105 and batch number 823207 or earlier. Paragraph (1) of EASA AD 2021-0096 addresses Group 1 helicopters that have incorporated the actions required by paragraph (2) of EASA AD 2019-0057. The FAA did not issue an AD that corresponds to EASA AD 2019-0057, therefore, this AD requires, for Group 1 helicopters, an initial inspection of the torque tube assembly within 50 hours time-in-service (TIS) after the effective date of the FAA AD and repetitive inspections thereafter at intervals not to exceed 100 hours TIS.

In addition, where paragraph (5) of EASA AD 2021-0096 specifies, for Group 1 helicopters, replacement of an affected part with a serviceable part “within 36 months after April 3, 2019 [the effective date of EASA AD 2019-0057]”, for this AD, the compliance time is within 24 months after the effective date of this AD.

## Costs of Compliance

The FAA estimates that this AD affects 136 helicopters of U.S. registry. The FAA estimates the following costs to comply with this AD:

### Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspection	2 work-hours X \$85 per hour = \$170 per inspection cycle	\$0	\$170 per inspection cycle	\$23,120 per inspection cycle
Replacement	16 work-hours X \$85 per hour = \$1,360	\$9,928	\$11,288	\$1,535,168

The FAA has included all known costs in its cost estimate. According to the manufacturer, however, some of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected operators.

### **Authority for this Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

## **The Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

**2021-22-05 Leonardo S.p.a.:** Amendment 39-21778; Docket No. FAA-2021-0572; Project Identifier MCAI-2021-00391-R.

#### **(a) Effective Date**

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

#### **(b) Affected ADs**

None.

#### **(c) Applicability**

This AD applies to Leonardo S.p.a. Model A119 and AW119 MKII helicopters, certificated in any category, all serial numbers.

#### **(d) Subject**

Joint Aircraft Service Component (JASC) Code: 6700, Rotorcraft Flight Control

#### **(e) Unsafe Condition**

This AD was prompted by reports of abnormal play on the collective torque tube on two Model AW119 MKII helicopters. The FAA is issuing this AD to address abnormal play on the collective torque tube, which could result in reduced control of the



helicopter, resulting in a forced landing and consequent damage to the helicopter and injury to occupants.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Requirements**

Except as specified in paragraph (h) of this AD: Comply with all required actions and compliance times specified in, and in accordance with, European Union Aviation Safety Agency (EASA) AD 2021-0096, dated March 31, 2021 (EASA AD 2021-0096).

**(h) Exceptions to EASA AD 2021-0096**

(1) Where EASA AD 2021-0096 refers to flight hours (FH), this AD requires using hours time-in-service (TIS).

(2) Where EASA AD 2021-0096 refers to its effective date, this AD requires using the effective date of this AD.

(3) Where paragraphs (1) and (2) of EASA AD 2021-0096 specify the compliance times for Group 1 helicopters to inspect the affected part, this AD requires an initial inspection within 50 hours TIS after the effective date of this AD, and thereafter at intervals not to exceed 100 hours TIS.

(4) Where paragraph (5) of EASA AD 2021-0096 specifies, for Group 1 helicopters, replacement of an affected part with a serviceable part “within 36 months after April 3, 2019 [the effective date of EASA AD 2019-0057],” for this AD, that replacement must be done within 24 months after the effective date of this AD.

(5) Where the service information referenced in EASA AD 2021-0096 specifies to return a torque tube assembly to the manufacturer, this AD does not include that requirement.

(6) Where the service information referenced in EASA AD 2021-0096 specifies to contact the manufacturer “in case of doubt” regarding the batch number on a torque

tube assembly, determining the batch number is required by this AD but contacting the manufacturer is not required.

(7) This AD does not mandate compliance with the “Remarks” section of EASA AD 2021-0096.

**(i) No Reporting Requirement**

Although the service information referenced in EASA AD 2021-0096 specifies to submit certain information to the manufacturer, this AD does not include that requirement.

**(j) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, International Validation Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the International Validation Branch, send it to the attention of the person identified in paragraph (k) of this AD. Information may be emailed to: 9-AVS-AIR-730-AMOC@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

**(k) Related Information**

For more information about this AD, contact Andrea Jimenez, Aerospace Engineer, COS Program Management Section, Operational Safety Branch, Compliance & Airworthiness Division, FAA, 1600 Stewart Ave., Mail Stop: Room 410, Westbury, NY 11590; telephone (516) 228-7330; email [andrea.jimenez@faa.gov](mailto:andrea.jimenez@faa.gov).

**(l) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) European Union Aviation Safety Agency (EASA) AD 2021-0096, dated March 31, 2021.

(ii) [Reserved]

(3) For EASA AD 2021-0096, contact EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; telephone +49 221 8999 000; email [ADs@easa.europa.eu](mailto:ADs@easa.europa.eu); Internet [www.easa.europa.eu](http://www.easa.europa.eu). You may find this EASA AD on the EASA website at <https://ad.easa.europa.eu>.

(4) You may view this material at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N 321, Fort Worth, TX 76177. For information on the availability of the EASA material at the FAA, call (817) 222-5110.

(5) You may view this material that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email [fr.inspection@nara.gov](mailto:fr.inspection@nara.gov), or go to:

<https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on October 13, 2021.

Lance T. Gant, Director,  
Compliance & Airworthiness Division,  
Aircraft Certification Service.

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